CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-49
NPDES NO. CA 0037885

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

CONTRA COSTA COUNTY SANITATION DISTRICT NO. 5
PORT COSTA
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Contra Costa County Sanitation District No. 5, hereinafter called the discharger, submitted a report of waste discharge dated April 20, 1984 for reissuance of NPDES Permit No. CA0037885.

2. The discharger has discharged an estimated average dry weather flow of 0.015 million gallons per day (mgd) from its septic tank. New recirculating sand filter beds are to provide secondary treatment for the septic tank effluent are being completed. Dry weather design capacity of the septic tank and filter beds plant will be 0.033 mgd. This plant treats domestic wastewater from the Port Costa community. The treated wastewater is discharged into Carquinez Strait, a water of the State and United States, east of the filter beds through a submerged diffuser about 60 feet offshore at a depth of 14.95 feet below mean lower low water. Latitude 122 deg., 10 min., 56 sec.; Longitude 38 deg., 02 min., 55 sec.

3. The discharger reports there has been wet weather overflow from the sewer system in the past. In the future, all wastewater will pass through the septic tank but only 0.5 mgd will be treated by the filter beds. Septic tank effluent in excess of 0.5 mgd will be mixed with the filter beds' effluent and discharged through the outfall. In infiltration and inflow investigation of the sewer system is planned.

4. The discharge is presently governed by Waste Discharge Requirements, Order Nos. 79-103 and 82-46, which allow discharge into Carquinez Strait.

5. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for Carquinez Strait and contiguous waters.

6. The beneficial uses of Carquinez Strait and contiguous water bodies are:

   - Water contact recreation
   - Non-contact water recreation
   - Wildlife Habitat
   - Preservation of Rare and Endangered Species
   - Estuarine Habitat

- Fish migration and spawning
- Industrial process supply
- Navigation
- Commercial and Sport Fishing

7. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.

8. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

9. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection system and pump stations tributary to the treatment plant is prohibited.

2. The average dry weather flow shall not exceed 0.033 mgd. Average shall be determined over three consecutive months each year.

3. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limit:

Constituents	Units	30-day Average	7-day Average	Maximum Daily	Instantaneous Maximum
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. BOD_5 or	mg/l	30	45	60	-

Carbonaceous BOD_5(1)	mg/l	25	40	50	-
c. Total Suspended Solids	mg/l	30	45	60	-
d. Oil & Grease	mg/l	10	-	20	-
e. Total Chlorine Residual (2)	mg/l	-	-	-	0.0

(1)Effective upon its promulgation in the new secondary treatment definition.

(2)Requirement defined as below the limit of detection in standard test methods.

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same times during the same period (85 percent removal).

3. The pH of the discharge shall not exceed 9.0, nor be less than 6.0.

4. The survival of test organisms acceptable to the Executive Officer in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples.

5. Representative samples of the effluent shall not exceed the following limits:(1)

Constituent	Unit of Measurement	6 month median	Daily Maximum
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons (2)	mg/l	0.002	0.004

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

6. The moving median value for the MPN of total coliform in any five(5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters. Any single sample shall not exceed 10,000 MPN/100 ml.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visibile, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	7.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved Sulfide	0.1 mg/l maximum
c.	pH	Variation from natural ambient pH by more than 0.5 pH units.
d.	Un-ionized ammonia	0.025 mg/l as N Annual Median 0.4 mg/l as N Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Orders 79-103 and 82-46. Orders Nos. 79-103 and 82-46 are hereby rescinded.

2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:

   Mass Emission Limit in lbs/day = Concentration limit in mg/l x 8.34 x Actual Flow in mgd averaged over the time interval to which the limit applies.

3. The discharger shall comply with all sections of this Order immediately upon adoption except as stipulated in Provision 4.

4. The discharger shall document compliance with Provision A.1 and with the long term goal of providing secondary treatment for all flows and eliminating all overflows according to the following schedule:

Task	Compliance Date
a. Submit Wet Weather Flow Management Plan, acceptable to the Executive Officer, for sewer maintenance repair, and replacement and other facility construction to reduce, control, or eliminate excessive wet weather flows and overflows. Quarterly status reports shall be submitted during development of this plan.	December 31, 1984

5. The discharger shall review and update his Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year. Documentation of operator input and review shall accompany each annual update.

6. The discharger shall review and update by December 31 annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

7. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

8. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977. Standard Provision C.2. is revised to read as follows:

    2. The "30-day, or 7-day, average" discharge is the total discharge by weight during 30, or 7, consecutive calendar day periods, respectively, divided by the number of days in the period that the facility was discharging. Where less than daily sampling is required by this permit, the 30-day, or 7-day, average discharge shall be determined by the summation of all the measured discharges by weight divided by the number of days during the 30, or 7, consecutive calendar day period when the measurements were made. For other than 7-day or 30-day periods, compliance shall be based on the average of all measurements made during the specified period.

9. This Order expires August 15, 1989. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

10. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on August 15, 1984.

ROGER B. JAMES
Executive Officer

Attachments:
Standard Provisions &
Reporting Requirements, April 1977
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CONTRA COSTA SANITATION DISTRICT NO. 5

PORT COSTA

CONTRA COSTA COUNTY

NPDES NO. CA 0037885

ORDER NO. 84-49

CONSISTS OF

PART A, 1/78

AND

PART B,

Revised March 12, 1985

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

Station	Description
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present and all treatment has occurred.
E-001-D	At any point in the disinfection facilities for Waste E-001 at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

Station	Description
C-1	At a point in Carquinez Strait, located in the vicinity of the discharge point and accessible from the shoreline.
C-3	At a point in Carquinez Strait, located approximately 50 feet down current from the point of discharge and accessible from the shoreline.
C-R	At a point in Carquinez Strait, located 1,000 feet upcurrent from the point of discharge, accessible from the shoreline.

D. LAND OBSERVATIONS

Station	Description
P-1 thru P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES

Station	Description
0-1 thru 0-'n'	Bypass or overflows from manholes, pump stations or collection system.

Note: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting - Shall be submitted monthly and include date, time, and period of each overflow or bypass.

II. SCHEDULE OF SAMPLING, MEASUREMENT, AND ANALYSIS

A. The schedule of sampling, measurements, and analysis shall be that given as Table I.

B. Due to subsurface hazards in the receiving waters, receiving water samples may be taken from the shoreline using a "pole-and-bucket" or similar technique.

III. MODIFICATIONS OF PART A

This Self-Monitoring Program does not include the following paragraphs of Part A:

C.3, C.4, C.5.d, D.4

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 84-49.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date August 23, 1984

Attachment:
Table I (2 pages)

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A		E-001			E-001-D		C					
TYPE OF SAMPLE	G	C-24	G	C-24	Cont	G	C-24	G					
Flow Rate (mgd)					D								
BOD, 5-day, 20°C, or COD (mg/l & kg/day)	(1) W/Q			(1) W/Q									
Chlorine Residual & Dosage (mg/l & kg/day)			3/W		(8)(6) Cont	3/W	(8)(6) Cont						
Settleable Matter (ml/1-hr. & cu. ft./day)				(1) W/Q									
Total Suspended Matter (mg/l & kg/day)	(1) W/Q			(1) W/Q									
Oil and Grease (mg/l & kg/day)			(7) Q										
Coliform (Total or Fecal) (MPN/100 ml) per req't						(2) W							
Fish Tox'y 96-hr. TL_{50}% Surv'l in undiluted waste				Q									
Ammonia Nitrogen (mg/l & kg/day)				2/Y				(5) M/Y					
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)			(1) W/Q					(5) M/Y					
Dissolved Oxygen (mg/l and % Saturation)			(1) W/Q					(5) M/Y					
Temperature (°C)													
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)													
Arsenic (mg/l & kg/day)													
Cadmium (mg/l & kg/day)													
Chromium, Total (mg/l & kg/day)													
Copper (mg/l & kg/day)													
Cyanide (mg/l & kg/day)													
Silver (mg/l & kg/day)													
Lead (mg/l & kg/day)													

TABLE I (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A		E-001			E-001-D		C	P				
TYPE OF SAMPLE	G	C-24	G	C-24	Cont	G	C-24	G					
Mercury (mg/l & kg/day)													
Nickel (mg/l & kg/day)													
Zinc (mg/l & kg/day)													
Phenolic Compounds (mg/l & kg/day)													
All Applicable Standard Observations								(3) W	(4) W				
Bottom Sediment Analyses and Observations													
Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)													
Un-ionized ammonia as N (mg/l)								Y					

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stattions
C = receiving water stations
P = treatment facility perimeter stations

Cont = continuous
Q = quarterly, once in March, June, Sept. and December

(1) After aguiring 6 months of operating data including wet and dry weather periods, the frequency of sampling may be reduced from weekly to quarterly (Q). If quarterly analysis reveals violations of 30-day average limits, sampling frequency shall be increased to weekly until consistent compliance with permit limits is achieved.

(2) If median of 4 samples shows violations of coliform limitations, sampling frequency shall be increased to 3/W until consistent compliance is verified.

(3) Observations shall include only those contained in items C.5.a(1), (2), (3), and C.5.c of Part A (Jan 1978) of Self-Monitoring Program.

(4) Perimeter observations shall include only C.5.e.1 (odors) of Part A (Jan 1978).

(5) Monthly samples shall be collected for 6 months including dry and wet weather periods; frequency may then be reduced to annual.

(6) For chlorine residual prior to de-chlorination, minimum and maximum values from strip charts should be reported on a daily basis. Grab samples taken 3/W should also be reported.

For chlorine residual following de-chlorination, daily maximum should be reported based on strip chart. Grab sample analyses taken 3/W should also be reported.

(7) Oil and Grease sampling shall consist of 3 grab samples taken at equal intervals during the sampling day, with each grab being collected in a glass container. A composite shall be made using equal volumes of each grab. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent as soon as possible after use, and the solvent rinsings shall be added to the composite wastewater sample for extraction and analysis.

(8) An alternate monitoring schedule during contractor's demonstration of compliance may be approved. After contractor's demonstration of compliance, the monitoring schedule will be reviewed and may be revised by the Executive Officer.